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FLESHNER & KIM, LLP			YANG, LINA	
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Please find below and/or attached an Office communication concerning this application or proceeding.

A

Office Action Summary	Application No. 10/022,209	Applicant(s) JIN, JONG HYUN	
	Examiner Lina Yang	Art Unit 2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/20/2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-16, 21-23 and 27-30 is/are rejected.
- 7) ☒ Claim(s) 5, 17-20, 24-26, 31 and 32 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 3 is objected to because of the following informalities:

Please spell out "IWF" and "PDSN" recited in claim 3.

Appropriate correction is required.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "radio link connecting means configured to directly connect the first and second mobile stations" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for

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consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-6, 13, 22 and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites: "radio link connecting means configured to *directly connect* the first and second mobile stations". It's not clear how to configure the radio link means to "directly connect" the first and second mobile stations. The claimed disclosure: claims, drawings and specification does not teach how to configure the radio link means to "directly connect " the first and second mobile stations.

Claims 3 and 22 both recite: "data is *directly* communicated between the first and second stations according to the multimedia call service option". It's not clear that what "directly" refers to. Does it mean the data is communicated between the first and second stations without involve the third party?

Claims 13 and 30 both recite: "the multimedia data bypass service option between the originating and receiving mobile stations sets up a radio link protocol to *directly connect* the multimedia call". It's not clear that what "directly connect" refers to. Does it mean the multimedia call is directly connected between originating and receiving mobile stations without involve the third party other than an IWF/PDSN.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351 (a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 27 is rejected under 35 U.S.C. 102(e) as being anticipated by Le (U. S. Patent No. 6,594,276 B1).

Regarding claim 27, Le teaches a method of controlling a multimedia call in a mobile communication system, comprising:

setting up a radio call from an originating mobile station (MS1 12 in fig. 7, for more detailed information about MS 12, referring to fig.1; col. 5 lines 47-48) to a receiving mobile station (MS1 12 in fig. 7, for more detailed information about MS 12, referring to fig.1; col. 5 lines 47-48) by transmitting a multimedia call service option to a base station/base station controller (ANI 302 or ANI 304 in fig. 7; ANIs are associated with base stations/ base station controllers, col. 6 lines 37-39 and col. 11 lines 36-39) (figs. 1-4);

setting up a multimedia call between the originating and receiving mobile stations after setting up the radio call in accordance with the multimedia call service option (figs. 1-4); and

performing multimedia communication between the originating mobile station and the receiving mobile station without an interworking function (IWF) or a packet data serving node (PDSN) (fig. 7 and fig. 5; 12 to 14 without IWF/PDSN).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3-4, 6, 21-23 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Le (U. S. Patent No. 6,594,276 B1).

Regarding claims 1, Le teaches a system of controlling a multimedia call in a mobile communication system, comprising:

first and second mobile stations (MS1 12 and MS2 12 in fig. 7, for more detailed information about MS 12, referring to fig.1; col. 5 lines 47-48) to initiate and respond to a multimedia call, respectively and process a visual communication in accordance with a multimedia call service option (fig.1; col. 5 lines 51-54; fig. 7; col. 11 lines 34-42);

a base station/base station controller (ANI 302 or ANI 304 in fig. 7; ANIs are associated with base stations/ base station controllers, col. 6 lines 37-39 and col. 11 lines 36-39) configured to set up the multimedia call using a multimedia bypass service option after recognizing the multimedia call service option of at least one of the first and second mobile stations (fig. 5 and fig. 7 and corresponding descriptions);

radio link connecting means (element 24 in fig. 1) configured to directly connect the first and second mobile stations while bypassing a radio link protocol after each of the first and second mobile stations establishes a traffic channel (with the base station according to the multimedia call service option; and

means for transmitting/receiving multimedia data (element 22 in fig. 1) using a higher application protocol of the radio link protocol to maintain a multimedia call in each of the first and second mobile stations connected by the radio link connecting means.

Le further teaches a mobile switching center (ANI 304 in fig. 7) configured to set up the multimedia call using the base station/base station controller (ANI 304 in fig. 7) to control the second mobile station according to the multimedia call service option from the base station/base station controller (since ANI 304 performing the function of set up the multimedia call and it controls the second mobile station MS2 12, it is associated with a mobile switching center). Le differs from the claimed invention in that Le does not specifically teach the first and second mobile stations establish traffic channels with the same base station. However, the examiner takes an official notice that it is well known in the art that a base station/base station controller is needed to set up a multimedia call between two mobile stations if the mobile stations are under the coverage of the base station/base station controller. Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to use one base station/base station controller to set up the a multimedia call between two mobile stations in order to reduce the operation cost.

Regarding claim 3, Le further teaches that data is directly communicated between the first and second stations according to the multimedia call service option without passing through an IWF or a PDSN (fig. 7 and fig. 5; 12 to 14 without IWF/PDSN).

Regarding claim 4, Le further teaches that each of first and second mobile stations further comprises a packet data synchronization protocol for transmitting a frame for packet data synchronization with a counterpart mobile station (col. 8 lines 45-52).

Regarding claim 6, Le further teaches that the packet data synchronization protocol comprises a unique identifier (sequence number) configured to discriminate the frame of the counterpart mobile station for synchronization with the counterpart mobile station (col. 8 lines 45-52).

Regarding claim 21, Le teaches a system of controlling a multimedia call in a mobile communication system, comprising:

first and second mobile stations (MS1 12 and MS2 12 in fig. 7, for more detailed information about MS 12, referring to fig.1; col. 5 lines 47-48) to initiate and respond to a multimedia call, respectively and process multimedia communications in accordance with a multimedia call service option (fig.1; col. 5 lines 51-54; fig. 7; col. 11 lines 34-42);

a base station/base station controller (ANI 302 or ANI 304 in fig. 7; ANIs are associated with base stations/ base station controllers, col. 6 lines 37-39 and col. 11 lines 36-39) configured to set up the multimedia call using a multimedia bypass service option in response to the multimedia call service option of at least one of the first and second mobile stations (fig. 5 and fig. 7 and corresponding descriptions); and

Le further teaches a mobile switching center (ANI 304 in fig. 7) configured to set up the multimedia call using the base station/base station controller (ANI 304 in fig. 7) to control the second mobile station according to the multimedia call service option from the base station/base station controller (since ANI 304 performing the function of set up the multimedia call and it controls the second mobile station MS2 12, it is associated with a mobile switching center), and the first mobile station perform multimedia communications with the second mobile station over the set-up multimedia call without an interworking function (IWF) or a packet data serving node (PDSN) (fig. 7 and fig. 5; 12 to 14 without IWF/PDSN).

Le differs from the claimed invention in that Le does not specifically teach the first and second mobile stations establish traffic channels with the same base station. However, the examiner takes an official notice that it is well known in the art that a base station/base station controller is needed to set up a multimedia call between two mobile stations if the mobile stations are under the coverage of the base station/base station controller. Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to use one base station/base station controller to set up the a multimedia call between two mobile stations in order to reduce the operation cost.

Regarding claim 22, Le further teaches data is directly communicated between the first and second stations according to the multimedia call service option (fig. 7 and fig. 5; 12 to 14 without IWF/PDSN).

Regarding claim 23, Le further teaches the multimedia call is set-up between the originating and receiving mobile station using an application protocol higher than a radio link protocol option (fig. 5 12 to 14 through 202-RTP).

Regarding claim 29, Le further teaches that setting up the radio call between the mobile stations (MS1 12 and MS2 12 in fig. 7) in the base station/base station controller (302 or 304 in fig. 7) by recognizing the multimedia call service option and using a multimedia data bypass service option in setting up the multimedia call between the mobile stations. Le differs from the claimed invention in that Le does not specifically teach the first and second mobile stations establish radio call with the same base station. However, the examiner takes an official notice that it is well known in the art that a base station/base station controller is needed to set up a multimedia call between two mobile stations if the mobile stations are under the coverage of the base station/base station controller. Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to use one base station/base station controller to set up the a multimedia call between two mobile stations in order to reduce the operation cost.

Regarding claim 30, Le further teaches that the multimedia data bypass service option between the originating and receiving mobile stations sets up a radio link protocol to directly connect the multimedia call (fig. 7 and fig. 5; 12 to 14 without IWF/PDSN).

6. Claims 2, 7-9 and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Le et al (U. S. Patent No. 6,594,276 B1) in view of Altom et al. (U. S. Patent No. 5,627,978).

Regarding claim 2, Le differs from the claimed invention in that Le does not specifically teach the first mobile station initiates the multimedia call in accordance with commands received from a user interface, and sets up the multimedia call using a telephone number of the second mobile station. However, it is well known in the art to use a phone number through a user interface to initiate a mobile communication. For example, Altom teaches a mobile station initiates the multimedia call in accordance with commands received from a user interface, and sets up the multimedia call using a telephone number of the second mobile station (col. 2 lines 44-46). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include the first mobile station initiates the multimedia call in accordance with commands received from a user interface, and sets up the multimedia call using a telephone number of the second mobile station, as taught by Altom, in the assembly of Le in order to provide a user friendly environment.

Regarding claim 7, Le teaches a method of controlling a multimedia call in a mobile communication system (fig. 7 for controlling a multimedia call from mobile station to mobile station, but fig. 5 and description of fig. 5 has detailed information about the part from mobile station to ANI), comprising: initiating a radio call from an originating mobile station (MS 12 in fig. 5; col. 5 lines 66-67 and col. 6 lines 1-2); recognizing in a base station/base station controller a multimedia call service option transmitted from the originating mobile station (ANI 34 in fig. 5; ANI is associated with base stations/ base station controllers, col. 6 lines 37-39 and col. 11 lines 36-39); setting up the radio call through the base station where the receiving mobile station is located using the multimedia call service option (ANI 34 in fig. 5; ANI is associated with base stations/ base station controllers, col. 6 lines 37-39 and col. 11 lines 36-39); and setting up the multimedia call between the originating and receiving mobile stations after said step of setting up the radio call (fig. 7; col. 11 lines 8-13).

Le differs from the claimed invention in that Le does not specifically teach initiating a radio call from an originating mobile in accordance with a receiving mobile station telephone number. However, it is well known in the art to use a phone number initiate a mobile communication. For example, Altom teaches initiating a radio call from an originating mobile in accordance with a receiving mobile station telephone number (col. 2 lines 44-46). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include initiating a radio call from an originating mobile in accordance with a receiving mobile station telephone number, as taught by Altom, in the assembly of Le in order to start a communication.

Le further differs from the claimed invention in that Le does not specifically teach confirming the radio call using the service option from the base station and setting up the radio call upon authorization from the receiving mobile station. However, the examiner takes an official notice that it is well known in the art that a two-way communication, such as a radio call, needs both end users willingness of participation. Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include confirming the radio call using the service option from the base station and setting up the radio call upon authorization from the receiving mobile station in order to make a reliable communication.

Regarding claim 8, Le further teaches that transmitting and receiving video data between the originating and receiving mobile stations without using an interworking function (IWF) or a packet data serving node (PDSN) (fig. 7 and fig. 5; 12 to 14 without IWF/PDSN).

Regarding claim 9, Le differs from the claimed invention in that Le does not specifically teach that authorization of the receiving mobile station is provided by a user of the receiving mobile station accepting the call upon being notified of the radio call using the multimedia call service option. However, the examiner takes an official notice that it is well known in the art that a two-way communication, such as a radio call, needs both end users willingness of participation. Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include

authorization of the receiving mobile station is provided by a user of the receiving mobile station accepting the call upon being notified of the radio call using the multimedia call service option in order to make a reliable communication.

Regarding claim 12, Le further teaches that setting up the radio call between the mobile stations in the base station/base station controller by recognizing the multimedia call service option (16-18 in fig. 1; and 214 in fig. 5) and using a multimedia data bypass service option in setting up the multimedia call between the mobile stations (202 in fig. 5).

Regarding claim 13, Le further teaches that the multimedia data bypass service option between the originating and receiving mobile stations sets up a radio link protocol to directly connect the multimedia call without passing through an IWF or a PDSN (fig. 7 and fig. 5; 12 to 14 without IWF/PDSN).

Regarding claim 14, Le further teaches that the multimedia call service communicates packet data among the originating and receiving mobile stations, the base station/base station controller, and a mobile switching center at a prescribed bit rate by using a fixed bit service option (col. 3 lines 26-27).

Regarding claim 15, Le further teaches that the multimedia call includes packet services having a first data rate and a second data rate the second data rate being higher than the first data rate (col. 2 lines 5-8 and col. 3 lines 26-27. Each channel has a constant rate and different channels have different rate).

7. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Le et al (U. S. Patent No. 6,594,276 B1) in view of Kweon et al. (U. S. Patent No. 6,111,866).

Regarding claim 28, Le further teaches that the multimedia call is set-up between the originating and receiving mobile station using an application protocol higher than RLP to maintain multimedia communication so as to transmit a multimedia data (fig. 5 202). Le differs from the claimed invention in that Le does not specifically teach the radio call is set-up between the originating and receiving mobile stations in accordance with a radio link protocol (RLP). However, it is well known in the art that radio link protocol is used to establish the initial radio communication between originating and receiving mobile stations, and between mobile station and base station. For example, Kweon teaches that the mobile stations and the base station concurrently initiate radio link protocol when a traffic channel is allocated from the base station and a service option is responded (col. 2 lines 17-22). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include the radio call is set-up between the originating and receiving mobile stations in accordance with a

radio link protocol (RLP), as taught by Kweon in the assembly of Le in order to perform the radio communication.

8. Claim 10,11 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Le et al (U. S. Patent No. 6,594,276 B1) in view of Altom et al. (U. S. Patent No. 5,627,978) and further in view of Kweon et al. (U. S. Patent No. 6,111,866).

Regarding claim 10, Le further teaches establishing a traffic channel based on the service option (214 in fig. 5; col.3 lines 26-27). Le differs from the claimed invention in that Le does not specifically teach processing a radio link protocol between the originating and receiving mobile stations and the corresponding base station in a bypass service option. However, it is well known in the art that radio link protocol is used to establish the initial radio communication between originating and receiving mobile stations, and between mobile station and base station. For example, Kweon teaches that the mobile stations and the base station concurrently initiate radio link protocol when a traffic channel is allocated from the base station and a service option is responded (col. 2 lines 17-22). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include processing a radio link protocol between the originating and receiving mobile stations and the corresponding base station in a bypass service option, as taught by Kweon in the modified assembly of Le and Altom in order to perform the radio communication.

Regarding claim 11, Le further teaches multimedia call is set-up between the originating and receiving mobile station using an application protocol higher than RLP to maintain a visual conversation which transmits a multimedia data (202 fig. 5; col. 11 lines 8-13). Le differs from the claimed invention in that Le does not specifically teach the radio call is set-up between the originating and receiving mobile stations in accordance with a radio link protocol (RLP). However, it is well known in the art that radio link protocol is used to establish the initial radio communication between originating and receiving mobile stations, and between mobile station and base station. For example, Kweon teaches that the mobile stations and the base station concurrently initiate radio link protocol when a traffic channel is allocated from the base station and a service option is responded (col. 2 lines 17-22). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include the radio call is set-up between the originating and receiving mobile stations in accordance with a radio link protocol (RLP), as taught by Kweon in the modified assembly of Le and Altom in order to perform the radio communication.

Regarding claim 16, Le further teaches that connecting the multimedia call between the originating and receiving mobile stations and processing a visual communication between the stations in accordance with a higher application protocol after the radio link protocol is processed (202 in fig. 5; col. 11 lines 8-13). Le differs from the claimed invention in that Le does not specifically teach processing a radio link protocol between the originating and receiving mobile stations to set up the multimedia

call when the multimedia call is initiated by the originating mobile station. However, it is well known in the art that radio link protocol is used to establish the initial radio communication between originating and receiving mobile stations, and between mobile station and base station. For example, Kweon teaches that the mobile stations and the base station concurrently initiate radio link protocol when a traffic channel is allocated from the base station and a service option is responded (col. 2 lines 17-22). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include processing a radio link protocol between the originating and receiving mobile stations to set up the multimedia call when the multimedia call is initiated by the originating mobile station, as taught by Kweon in the modified assembly of Le and Altom and in order to perform the radio communication.

Allowable Subject Matter

9. Claims 5, 17-20, 24-26 and 31-32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lina Yang whose telephone number is (571)272-3151.

The examiner can normally be reached on 7:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LY

A handwritten signature in black ink, appearing to read 'Huy Vu', with a stylized, flowing script.

HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600